



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

09/483,476

01/14/2000

Mao Xu

1305

8450

28004

7590

04/15/2004

SPRINT

6391 SPRINT PARKWAY

KSOPHT0101-Z2100

OVERLAND PARK, KS 66251-2100

EXAMINER

DUONG, FRANK

ART UNIT

PAPER NUMBER

2666

DATE MAILED: 04/15/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/483,476

Applicant(s)

XU ET AL.

Examiner

Frank Duong

Art Unit

2666

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 26 January 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-14, 17-31, 34-46 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☐ Claim(s) \_\_\_\_\_ is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- |                                                                                                                        |                                                                                         |
|------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                                                       | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948)                                    | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____                                                |

Art Unit: 2666

### **DETAILED ACTION**

1. This Office Action is a response to the amendment dated 1/26/2004. Claims 1-14, 17-31 and 34-46 are pending in the application.

### ***Drawings***

2. The replacement of FIG. 3 of the drawings was received on 1/26/04. The replacement of drawings is approved.

### ***Specification***

The following guidelines illustrate the preferred layout for the specification of a utility application. These guidelines are suggested for the applicant's use.

#### **Arrangement of the Specification**

As provided in 37 CFR 1.77(b), the specification of a utility application should include the following sections in order. Each of the lettered items should appear in upper case, without underlining or bold type, as a section heading. If no text follows the section heading, the phrase "Not Applicable" should follow the section heading:

- (a) TITLE OF THE INVENTION.
- (b) CROSS-REFERENCE TO RELATED APPLICATIONS.
- (c) STATEMENT REGARDING FEDERALLY SPONSORED RESEARCH OR DEVELOPMENT.
- (d) INCORPORATION-BY-REFERENCE OF MATERIAL SUBMITTED ON A COMPACT DISC (See 37 CFR 1.52(e)(5) and MPEP 608.05. Computer program listings (37 CFR 1.96(c)), "Sequence Listings" (37 CFR 1.821(c)), and tables having more than 50 pages of text are permitted to be submitted on compact discs.) or  
REFERENCE TO A "MICROFICHE APPENDIX" (See MPEP § 608.05(a). "Microfiche Appendices" were accepted by the Office until March 1, 2001.)
- (e) BACKGROUND OF THE INVENTION.
  - (1) Field of the Invention.
  - (2) Description of Related Art including information disclosed under 37 CFR 1.97 and 1.98.
- (f) BRIEF SUMMARY OF THE INVENTION.

Art Unit: 2666

(g) BRIEF DESCRIPTION OF THE SEVERAL VIEWS OF THE DRAWING(S).

(h) DETAILED DESCRIPTION OF THE INVENTION.

(i) **CLAIM OR CLAIMS (commencing on a separate sheet).**

(j) ABSTRACT OF THE DISCLOSURE (commencing on a separate sheet).

(k) SEQUENCE LISTING (See MPEP § 2424 and 37 CFR 1.821-1.825. A "Sequence Listing" is required on paper if the application discloses a nucleotide or amino acid sequence as defined in 37 CFR 1.821(a) and if the required "Sequence Listing" is not submitted as an electronic document on compact disc).

3. The disclosure is objected to because of the following informalities:

Page 12, lines 16-17, "CLAIMS: We claim:" should be deleted.

Page 13, first line should start with --We claim-- or --What is claim is--.

Appropriate correction is required.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claims 1-14 and 17-31 are rejected under 35 U.S.C. 102(e) as being anticipated by Sriram et al (USP 6,269,738) (hereinafter "Sriram").

In Sriram reference Sriram discloses a dynamic call admission control in a packet voice using AAL2 system that takes into account different bandwidth need for call types

Art Unit: 2666

in deciding whether to admit a new call (*see Abstract and thereafter*). Sriram's description of the invention read on the claimed invention as corresponding below:

Regarding **claim 1**, in accordance with Sriram reference entirety, Sriram discloses a customer premises communication hub (Fig. 4; 125) comprising:

a silence suppression block (130) configured to compute a silence suppression gain in response to an incoming call request, wherein the silence suppression gain varies based on a number of currently active calls (*see col. 6, line 58 to col. 7, line 8, Sriram discloses the processor 130 performs functions such as silence suppression, assignment of sequence numbers, and background noise level notification and col. 7, lines 43-45, Sriram discloses silence suppression is applied to voice calls*);

a call admission block (135) configured to control access to a communication network (100) based on the silence suppression gain for the incoming call request (*see col. 7, lines 9-22*); and

a control system (110) configured to determine a call type of the incoming call (*see col. 6, lines 19-50, Sriram discloses call controller associates a predetermined call type with each call*) and control the silence suppression block (130) and the call admission block (135).

Regarding **claim 2**, in addition to features recited in base claim 1 (see rationales discussed above), Sriram further discloses an interface system (125) configured to receiving the incoming call request (106) and exchange call traffic (ATM cells) with the communication network (100) over a communication path (*connection between 135 and 100*) (*see col. 7, lines 9-22*).

Art Unit: 2666

Regarding **claim 3**, in addition to features recited in base claim 1 (see rationales discussed above), Sriram further discloses wherein the call type comprises: one of a voice call and a voice-band data call (see *Fig. 5 and col. 6, lines 22-41*).

Regarding **claim 4**, in addition to features recited in base claim 3 (see rationales discussed above), Sriram further discloses wherein the silence suppression block is configured to compute the silence suppression gain based on a number of currently active voice calls (see *col. 7, lines 43-45*).

Regarding **claim 5**, in addition to features recited in base claim 4 (see rationales discussed above), Sriram further discloses wherein the silence suppression block is configured to compute the silence suppression gain based on a mean talkspurt duration (see *Fig. 5 and Voice Activity=40% and col. 6, lines 25-30*).

Regarding **claim 6**, in addition to features recited in base claim 4 (see rationales discussed above), Sriram further discloses wherein the silence suppression block is configured to compute the silence suppression gain based on a mean silence duration (see *Fig. 5 and Voice Activity=40% and Average Silence=60% and col. 6, lines 25-30*).

Regarding **claim 7**, in addition to features recited in base claim 4 (see rationales discussed above), Sriram further discloses wherein the silence suppression block is configured to compute the silence suppression gain based on a packetization time (see *Fig. 5; Packetization Interval=5ms and col. 6, lines 52-57*).

Regarding **claim 8**, in addition to features recited in base claim 4 (see rationales discussed above), Sriram further discloses wherein the silence suppression block is

Art Unit: 2666

configured to compute the silence suppression gain based on a number of supposed voice calls (see *col. 7, lines 35-45*).

Regarding **claim 9**, in addition to features recited in base claim 4 (see rationales discussed above), Sriram further discloses wherein the silence suppression block is configured to compute the silence suppression gain based on an activity factor (see *Fig. 5; Voice Activity=40% and col. 6, lines 28-30*).

Regarding **claim 10**, in addition to features recited in base claim 4 (see rationales discussed above), Sriram further discloses wherein the silence suppression block is configured to compute the silence suppression gain based on a silence factor (see *Fig. 5; Average Silence=600ms and col. 6, lines 28-30*).

Regarding **claim 11**, in addition to features recited in base claim 4 (see rationales discussed above), Sriram further discloses wherein the call admission block (135) (see *col. 6, line 58 to col. 7, line 8*) is further configured to compute an effective bandwidth for the number of currently active voice calls (*col. 8, lines 36-37*), a number of currently active voice-band data calls (*col. 8, lines 38-47*), and the incoming call based on the silence suppression gain (*col. 8, lines 36-37*).

Regarding **claim 12**, in addition to features recited in base claim 11 (see rationales discussed above), Sriram further discloses wherein the call admission block is further configured to deny access (430) to the communication network if the effective bandwidth ( $B_0$ ) is greater than a provision bandwidth ( $W$ ) for the communication path (see *Fig. 8, block 405 and 430 and col. 8, lines 64-67*).

Art Unit: 2666

Regarding **claim 13**, in addition to features recited in base claim 12 (see rationales discussed above), Sriram further discloses wherein the call admission block is further configured to grant access to the communication network (100) if the effective bandwidth ( $B_0$ ) is less than the provisioned bandwidth ( $W$ ) for the communication path (see *Fig. 8, block 405 and 410, and col. 9, lines 1-6*).

Regarding **claim 14**, in addition to features recited in base claim 12 (see rationales discussed above), Sriram further discloses wherein the call admission block is further configured to grant access to the communication network (100) if the effective bandwidth ( $B_0$ ) is equal the provisioned bandwidth ( $W$ ) for the communication path (see *Fig. 8, block 405 and 410 and col. 9, lines 1-6*).

Regarding **claim 17**, in accordance with Sriram reference entirety, Sriram discloses a customer premises communication hub (*Fig. 4; 125*) comprising:

receiving (125) an incoming request (106);

determining a call type (110) of the incoming call request (see *col. 6, lines 19-50, Sriram discloses call controller 110 associates a predetermined call type with each call*);

computing (130) a silence suppression gain, wherein the silence suppression gain varies based on a number of currently active calls (see *col. 6, line 58 to col. 7, line 8, Sriram discloses the processor 130 performs functions such as silence suppression, assignment of sequence numbers, and background noise level notification and col. 7, lines 43-45, Sriram discloses silence suppression is applied to voice calls*); and

controlling access (135) to a communication network (100) based on the silence suppression gain for the incoming call request (see *col. 7, lines 9-22*).



Art Unit: 2666

Regarding **claim 18**, in addition to features recited in base claim 17 (see rationales discussed above), Sriram further discloses exchanging call traffic with the communication network (100) over a communication path (*connection between 135 and 100*) (see *col. 7, lines 9-22*).

Regarding **claim 19**, in addition to features recited in base claim 17 (see rationales discussed above), Sriram further discloses wherein determining the call type comprises: determining if the incoming call request is a voice call request (see *Fig. 5 and col. 6, lines 22-41*).

Regarding **claim 20**, in addition to features recited in base claim 17 (see rationales discussed above), Sriram further discloses wherein determining the call type comprises: determining if the incoming call request is a voice-band data call request (see *Fig. 5 and col. 6, lines 22-41*).

Regarding **claim 21**, in addition to features recited in base claim 17 (see rationales discussed above), Sriram further discloses computing the silence suppression gain based on a number of currently active calls (see *col. 7, lines 43-45*).

Regarding **claim 22**, in addition to features recited in base claim 17 (see rationales discussed above), Sriram further discloses computing the silence suppression gain based on a mean talkspurt duration (see *Fig. 5; Average Talkspurt=400ms and col. 6, lines 28-30*).

Regarding **claim 23**, in addition to features recited in base claim 17 (see rationales discussed above), Sriram further discloses computing the silence

Art Unit: 2666

suppression gain based on a mean silence duration (see *Fig. 5; Average Silence=600ms and col. 6, lines 28-30*).

Regarding **claim 24**, in addition to features recited in base claim 17 (see rationales discussed above), Sriram further discloses computing the silence suppression gain based on a packetization time (see *Fig. 5; Packetization Interval=5ms and col. 6, lines 52-57*).

Regarding **claim 25**, in addition to features recited in base claim 17 (see rationales discussed above), Sriram further discloses computing the silence suppression gain based on an activity factor (see *Fig. 5; Voice Activity=40% and col. 6, lines 28-30*).

Regarding **claim 26**, in addition to features recited in base claim 17 (see rationales discussed above), Sriram further discloses computing the silence suppression gain based on a silence factor (see *Fig. 5; Average Silence=600ms*).

Regarding **claim 27**, in addition to features recited in base claim 17 (see rationales discussed above), Sriram further discloses computing the silence suppression gain based on a number of supposed voice calls (see *col. 7, lines 35-45*).

Regarding **claim 28**, in addition to features recited in base claim 21 (see rationales discussed above), Sriram further discloses computing an effective bandwidth for the number of currently active voice calls (*col. 8, lines 36-37*), a number of currently active voice-band data calls (*col. 8, lines 38-47*), and the incoming call based on the silence suppression gain (*col. 8, lines 36-37*).

Art Unit: 2666

Regarding **claim 29**, in addition to features recited in base claim 28 (see rationales discussed above), Sriram further discloses wherein controlling access to the communication network (100) comprises denying access (430) to the communication network if the effective bandwidth ( $B_0$ ) is greater than a provision bandwidth ( $W$ ) for the communication path (see *Fig. 8, block 405 and 430 and col. 8, lines 64-67*).

Regarding **claim 30**, in addition to features recited in base claim 29 (see rationales discussed above), Sriram further discloses wherein controlling access to the communication network (100) comprises granting access (410) to the communication network if the effective bandwidth ( $B_0$ ) is less than a provision bandwidth ( $W$ ) for the communication path (see *Fig. 8, block 405 and 410 and col. 9, lines 1-6*).

Regarding **claim 31**, in addition to features recited in base claim 29 (see rationales discussed above), Sriram further discloses wherein controlling access to the communication network (100) comprises granting access (410) to the communication network if the effective bandwidth ( $B_0$ ) is equal than a provision bandwidth ( $W$ ) for the communication path (see *Fig. 8, block 405 and 410 and col. 9, lines 1-6*).

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Art Unit: 2666

5. Claims 34-46 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sriram.

Regarding claims 34-46, the claims call for a software product performing the steps of the method claims 17-31. Sriram discloses the method of claims 17-31 (see rationales discussed above) but fails to disclose the claimed software product.

However, translating the method steps into a computer program is deemed obvious.

Thus, it would have been obvious to those skilled in the art, having read Sriram reference, at the time of the invention was made to translate the method steps taught by Sriram (discussed in the rejection of claims 17-31) into a computer program to arrive the claimed invention with a motivation to provide for efficient bandwidth management in a call admission control (see *col. 2, lines 12-13*).

### ***Response to Arguments***

6. Applicant's arguments filed 1/26/2004 have been fully considered but they are not persuasive.

In the Remarks of the outstanding response, on page 11, pertaining the objection to the language on page 12, lines 16-17, Applicants state "*Applicants can find nothing in the statutes or the rules making this language in the specification improper (see 37 CFR § 1.75).*"

In response Examiner respectfully disagrees and would like to direct the Application's attention to the USPTO guidelines for the preferred layout of the specification of the utility application, bullet (i) (see 37 CFR 1.77(b)). The Claim or

Art Unit: 2666

Claims should commence on a separate sheet of paper. The Examiner's objection should serve that purpose.

In the Remarks of the outstanding response, on page 11 continues to page 12, line 1, pertaining the rejections of claims 1-14, 17-31, Applicants assert "*Sriram does not teach a communication hub as describe in claim 1 of the pending application. Claim 1, as amended, describes a customer premises communication hub ... the customer premises*".

In response Examiner respectfully disagrees for the following rationales:

First, Examiner recognizes the Applicants are their own lexicographers.

Second, the term "a *customer premises* communication hub" given the broadest, reasonable interpretation is equated to correspond to Sriram's "communication hub" [call processor 125].

Third, the recitation "*customer premises*" has not been given patentable weight because the recitation occurs in the preamble. A preamble is generally not accorded any patentable weight where it merely recites the purpose of a process or the intended use of a structure, and where the body of the claim does not depend on the preamble for completeness but, instead, the process steps or structural limitations are able to stand alone. See *In re Hirao*, 535 F.2d 67, 190 USPQ 15 (CCPA 1976) and *Kropa v. Robie*, 187 F.2d 150, 152, 88 USPQ 478, 481 (CCPA 1951).

Fourth, it has been held that if a prior art structure is capable of performing the intended use as recited in the preamble, then it meets the claim. See *In re Schreiber*, 128 F.3d 1473, 1477, 44 USPQ2d 1429, 1431 (Fed. Cir. 1997).

Art Unit: 2666

In the Remarks of the outstanding response, on page 12, pertaining the rejection of claims 1-14 and 17-31, Applicants allege Sriram reference does not teach the claimed invention of claim 1. To support the allegation Applicants state "*Sriram describes a call processor (125) that provides call admission to an ATM network (100). (see Sriram, FIG. 4). To provide call admission, the call processor first determines an initial bandwidth for call ( $B_o$ ) (see Sriram, col. 8, lines 41-54 ... spare bandwidth on a facility is greater than an estimated bandwidth (i.e., initial bandwidth) for the call ... communication hub in claim 1*".

In response Examiner respectfully disagrees and assert the Sriram reference teaches the claimed invention in the present condition. Examiner would like to direct Applicants' attention to Sriram reference, at col. 7, lines 35-45, Sriram discloses "*as new calls are placed from PBX 105 to call controller 110 ... call processor 125 implements a call admission strategy that is dynamically performed as a function of call type. In particular, this approach takes into account different bandwidth needs for different call types, and also takes advantages of statistical multiplexing of voice calls. It is assumed that silence elimination is applied to voice calls, i.e. no packets are transmitted during silence periods*". Moreover, in the specification, on page 5, lines 15-18 and page 6, lines 2-5, it is disclosed "*The silence suppression block 106 could be any logic block configured to compute a silence suppression gain for an incoming call based on a silence suppression realize for the incoming call and a number of currently active calls*" and "*If the call type is a voice call at step 202, processing continues at step 203 and the control system 202 uses the silence suppression block 106 to compute the silence*

Art Unit: 2666

*suppression gain based on the silence suppression realized for the incoming call and the number of currently active voice calls".* Accordance with the passage, the silence suppression gain of the currently active calls is computed in response to the incoming call request in order to determine whether to admit the call request; contradistinction to the Applicants' argument. Technically, it does make sense to compute the silence suppression gain of the existing calls to determine whether there is enough bandwidth to admit an incoming voice call request. Not the reverse process because the incoming call request has not been admitted yet. As clearly pointed out in the Office Action, Sriram discloses just that.

The argument on page 13 is similar to the one discussed above. Please see the above response.

Examiner believes an earnest attempt has been made in addressing all of the Applicants' arguments. Due to the amendment does not place the application in a better condition for allowance and the arguments are not persuasive, the rejection from the last Office Action is maintained.

### ***Conclusion***

**7. THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not

Art Unit: 2666

mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Frank Duong whose telephone number is (703) 308-5428. The examiner can normally be reached on 7:00AM-3:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Seema Rao can be reached on (703) 308-5463. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Frank Duong  
Examiner  
Art Unit 2666

Frank Duong